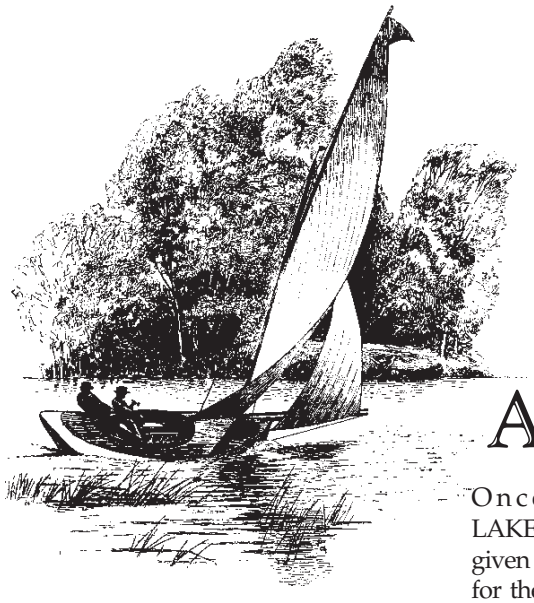
Florida
LAKEWATCH

A Publication Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume XII 1998



"Summer's here.
That suits me fine.
It may rain today,
but I don't mind.
It's my favorite time of the year
and I'm glad that it's here."

James Taylor 1980

In the previous LAKEWATCH newsletter (Volume XI, 1998) we:

- *reviewed the basics about data and why we monitor the "big four" parameters (total phosphorus, total nitrogen, chlorophyll and water clarity),*
- *showed different LAKEWATCH data formats,*
- *reviewed the basic "anatomy" of the graphs and tables provided in LAKEWATCH data packets, and*
- *promised to spend more time discussing LAKEWATCH data with you.*

And so as promised, our data odyssey continues here with:

☞ ***A Story Waiting to Be Heard/ Graphs and Tables (pages 4 & 5),***

☞ ***Countless Ways to Use Your Data (pg.3)***

We think you'll be pleasantly surprised at just how easy it is to decode your lake's story and to "talk the talk."

LAKEWATCH data packets are available to anyone who requests them.

A Story Waiting to Be Heard

Once a year, active LAKEWATCH samplers are given an annual data packet for their lake(s). The packets are hand-delivered at regional meetings or mailed directly to their home — just one of the perks of being a volunteer. Although it's a quiet and uneventful ritual, there is much to celebrate. LAKEWATCH data have proven to be invaluable to folks willing to take the time to decipher their meaning and use the information as a management tool.

LAKEWATCH volunteers study their well-earned annual data packets at regional meetings in Flagler County (left) and Hillsborough County (below).

The tables and graphs included in the packets, one of each for the "big four" parameters measured, provide legitimate documentation of the current conditions in LAKEWATCH lakes for comparison with lake conditions in the future. No longer will Floridians have to rely on memory to convince others that their observations are accurate. For some lakes, it's the first and only documentation in existence.

Volunteers who have monitored for three years or more are finding themselves with some interesting data packets; the data tables are several pages long and packed with numbers. The bar graphs are full of skinny bars. Patterns are beginning to emerge and a story is waiting to be revealed. So how does one "read" the story these graphs and tables are trying to tell? Check out pages 4 & 5 for a few warm-up exercises. *(Continued on pages 4 & 5)*

UNIVERSITY OF FLORIDA
Institute of Food and Agricultural Sciences
Department of Fisheries and Aquatic Sciences

From the director...

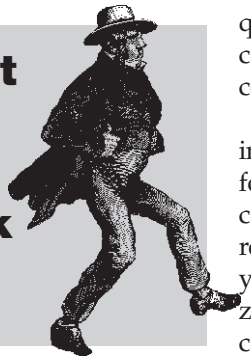
I'll never forget attending a talk by a noted lake expert (yes, a Ph.D.) in which he described the benefits of "keeping pee out of the lake." Folks in the lay audience were exchanging curious looks, but seemed to accept the topic with good grace. What the well-intentioned doctor had left out of the beginning of his speech was the fact that, in the scientific world, the letter "P" is used to represent the element phosphorus. Having unwittingly made this omission, he had given a talk that conveyed a message much different than the one he thought he was giving!

Aside from tickling my funny bone at the time, this event is the perfect example of a really rather serious problem. I am sure many of you can relate experiences that also illustrate the unfortunate fact that many scientists are not effective at communicating with nonscientists.

Where does this leave us if we want to learn more about a scientific topic such as lake ecology? We are faced with having to read materials that are dry, boring, and steeped in specialized terminology that their authors assume everyone uses all the time. Decoding these writings can be a daunting task.

The challenge is certainly felt at LAKEWATCH as our volunteers take measurements that result in lots and lots of numbers. In order for the numbers to make sense and be useful, folks have to learn what they mean; there is no choice but to understand the science.

"If you want to walk the walk, you'll have to talk the talk..."



We want to help. That's why we are dedicating segments of our newsletter to translating ideas — ideas that are crucial for your understanding of your lake and how it works — from the world of scientific jargon into plain English. Amy Richard, our information specialist was hired largely because her background was in writing about and illustrating scientific subject matter for lay people.

Tackling the science may not be everyone's cup of tea, but give it a try before you decide. All our articles are edited for scientific accuracy before being printed. We're also hoping that you will give us feedback. If you have any questions, please call us. I think the best communication is an interactive process, a two-way street.

So if you've avoided "science class" in the past, we hope you'll try again -- for your lake's sake. We are putting our collective heads together to make it a rewarding experience for you. And if you are willing to expand your horizons, you will become a better lake caretaker. We want our volunteers to be able to "walk the walk and talk the talk" with the best of them. In no time at all you too will be describing how to keep "P" out of the lake. Until next time...

— Sandy Fisher

Dear LAKEWATCH,

Every other month, I input some LAKEWATCH information into our Harbor Shores Homeowners Association newsletter. I have found that most folks are interested in anything concerning the health of our lakes and have had some very positive feedback. The following article was submitted recently and I expect to get some reaction!

> ***Message from Your LAKEWATCH Volunteers***
> *The condition of Lake Eustis continues to improve in terms of phosphorus, nitrogen, and algae content. Our test results back from the University of Florida show a steady decline in these nutrients since January 1997. The total phosphorus level declined 47.5%, the nitrogen declined 26.5% and the algae is down 46.7%. These are impressive figures and appear to mean that someone or something is doing a good job to clean up the lake! Results like these are important for folks to know about if one cares at all about the quality of our lake. LAKEWATCH volunteers are doing their best to keep the data flowing to the University of Florida so that people around the state can know of the changing conditions and results of their efforts.*

P.S. Seems like something like this all over the state would be a good way to let folks know about LAKEWATCH and drum up interest in our efforts. Maybe volunteers could input articles such as this to local newspapers, HOA bulletins and newsletters, library boards, etc... Keep testing! Bye.

Mike Scharstein

Florida
LAKEWATCH

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For more information about LAKEWATCH, to inquire about volunteer training sessions, or to submit materials for inclusion in this publication, write to:

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Inclusion does not constitute endorsement, nor does exclusion represent censure of any item, organization, individual, or institution by the University of Florida or the Florida LAKEWATCH program.

Director	Sandy Fisher
Chemist	Mary Stonecipher
Editor	Amy Richard

Countless Ways to Use LAKEWATCH Data

Now in it's eleventh year of volunteer monitoring, Florida LAKEWATCH (FLW) finds itself in the midst of a new and exciting phase. After training nearly two thousand volunteers and monitoring over 750 lakes we are finding ourselves waist deep in data — and quite pleased about it.

Our latest count revealed that over 200 Florida lakes have more than five years worth of data. Over 750,000 data points, or measurements, have been collected and stored in our database! This is a remarkable achievement and those of you who helped accomplish this goal should take a moment to pat yourself on the back.

Why is this so impressive and what does it mean for Florida lakes?

It means that researchers, students of all ages, water managers, and citizens are beginning to have enough data accumulated to "sink their teeth into." This steadily growing database is allowing us to greatly enhance our understanding of Florida lake habitats. Where limnologists (lake scientists) have had gaps in lake data, or no data at all, LAKEWATCH volunteers have helped fill the void. Where citizens had no data to document changes or to help create management strategies for their lake, they now have it and are using it in a myriad of ways.

The following are just a few examples of how your data are being used. Stay tuned!

1 LAKEWATCH data are providing an invaluable teaching tool for students of all ages, from grade school right on up to undergraduate and graduate level.

Grade school students are learning how to use spreadsheet and graphing programs using real data, about real lakes. From there, they can learn volumes about how to work together with others to create real-life management plans.

2 Graduate students now have a growing source of data to work with that represents a broad spectrum of Florida lake types.

For example, a recent University of Florida graduate student, Claude Brown, used FLW data to suggest that Florida lakes, as a group, exhibit distinct seasonal patterns in chlorophyll (algae) concentrations. His conclusions were based on analysis of 416 "lake-years" of data, from 209 LAKEWATCH lakes.

This study alone will be of great value to water managers around the state by helping them to predict which lakes will fit into this pattern and why some don't.

3 Lake residents are making realistic management plans for their lakes, based on LAKEWATCH data. For example, LAKEWATCHers on lake Brant were able to use their data to document the effects of using grass carp* to control the aquatic vegetation in their lake. Lake monitoring data from *before* a hydrilla infestation, *during* a hydrilla infestation, and *after* the introduction of grass carp can help others predict carp effects in their lakes.

**an exotic fish with a healthy appetite for aquatic plants*

"One of the most frequently asked questions in volunteer monitoring programs is 'What happens to my data?' People who consistently go out and collect water quality information aren't doing it just to collect a bunch of numbers. They want to know what this information is telling us about the water."

Steven Hubbell
Seize the Data!
Volunteer Monitor,
Spring 1995

4 Professional water managers are using LAKEWATCH data to predict and then implement the effects of specific management techniques.

For instance, Lake Silver in Orlando was recently awarded grant money from the City of Orlando Storm Water Utility Bureau (SWUB) for the purpose of implementing six specific management techniques to improve water clarity. According to Bruce Fallon,with the City of Orlando SWUB, the fact that there was already a monitoring program in place helped tremendously in getting the funds.

5 The Florida Lake Regions Project, completed last year, couldn't have been done without FLW data. The three year project documented regional differences in water chemistry of Florida lakes and resulted in the designation of forty-seven lake regions. These regions or groups of lakes were mapped out based on similarities in soil type, plant and algal growth, climate, land use, land cover, physical features of the area, water chemistry and water clarity.

For the first time ever, data is available on the state's full spectrum of unique lake types. Now we know that geology has much to do with why water chemistry in clear water lakes in the panhandle is so different from shallow green lakes in central and southern regions of the state. With this information, we can develop realistic expectations for Florida lakes.

6 Section 305(b) of our national Clean Water Act mandates that every US state assess their water quality every two years and submit those assessments to the US Environmental Protection Agency (US EPA). The EPA in turn, summarizes these assessments into a national report to Congress — commonly referred to as the *305(b) Report*. These reports are among the very few sources of information available on water quality conditions across the country.

LAKEWATCH data represent a significant portion of Florida's report to Congress and are also considered "on par" with professionally collected data. The EPA, Congress, and state decision makers rely on the 305(b) report to help them make decisions about where to focus funding, education, and technical support for water quality problems.

7 Researchers from all over the state are coming to appreciate the availability of LAKEWATCH's surface water chemistry data. LAKEWATCH data were recently used by a University of Florida researcher in a 30- year comparison study to determine if the water chemistry in Florida lakes has changed significantly in the past 30 years. This study is only the tip of the iceberg.

8 On an international level, LAKEWATCH data are included every year in the Great American Secchi Dip-In, sponsored by the North American Lakes Management Society and the US EPA. An annual event, the Dip-in makes use of preexisting volunteer monitoring programs to collect water clarity information from as many water bodies as possible in North America, Europe and even Australia.

9 FLW data also helps agencies expand their capabilities, even with limited budgets. For example, the Florida Game and Fresh Water Fish Commission (GFC) recently used FLW data for their ongoing mercury project.*

Without having to even leave the dock, GFC has been able to compare FLW data with their own data on mercury concentrations in fish. Putting this information together is helping biologists to predict which lakes are expected to have fish with higher mercury levels — a useful tool for anglers that like to eat fish! **FLW***

(See LAKEWATCH Newsletter, Volume X, Fall 1997, p 3)

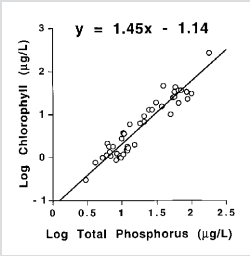
Continued from
"A Story Waiting to Be Told" pg.1

Graphs

are among the most valuable tools we have for telling a lake's story.

Graphs can compress reams of information into a visual image that can be quickly and easily deciphered for information.

There are all kinds of graphs being used by statisticians and scientists these days. Two of the more comon types are **scatter plot** and **bar** graphs.



Scatter plot graph

Scatter plot graphs are good for plotting more than one type of measurement on the same graph — to see if relationships exist among them. You'll see these types of graphs at lake management meetings and conferences as well as in future newsletters.

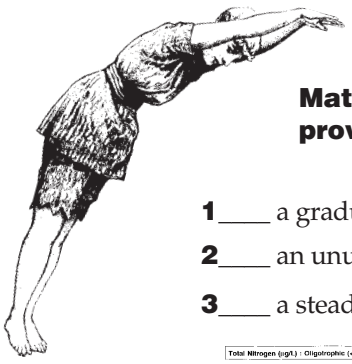
Bar graphs do a great job of illustrating individual data points or measurements and of displaying a summary of data—which is exactly why they are used in your LAKEWATCH data packets (see bar graphs at right). The height of each individual bar in the LAKEWATCH graphs represents an **average** of all the monitoring stations, usually three of them, that were sampled on one sampling date.

When several year's worth of bars are shown together in one graph, they reveal a lake's *story* at a glance. We can tell whether or not the phosphorus, nitrogen, or algae are increasing, decreasing, or cycling.

That's what **baseline data** is all about. By establishing what is normal for your lake, you'll be able to document whether conditions appear to be changing or staying the same—you'll be able to spot a "trend."

It's easier than you might think. Just for fun, we've put together a warm-up activity (top center of pg.) for you to improve your skills in reading bar graphs and interpreting their story.

For more practice, you can play the "data game" at your FLW regional meeting where we'll display graphs for all FLW lakes in your county. See you there!



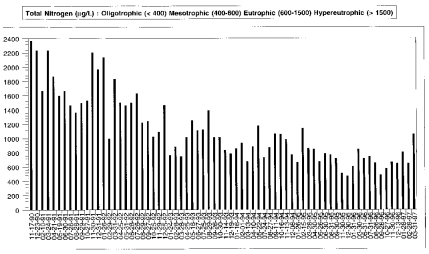
Diving in

Match the bar graphs A - F with the "trends" provided and check them with the answer key.

1____ a gradual increase

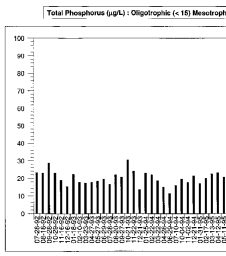
2____ an unusual event (sometimes called a "spike")

3____ a steady decrease



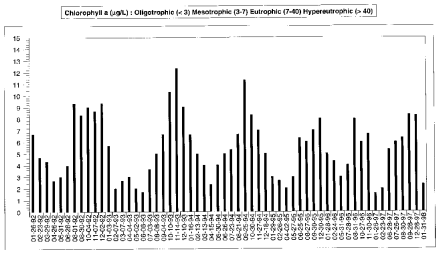
Graph A

Total nitrogen bar graph for Lake Lawsona in Orange County



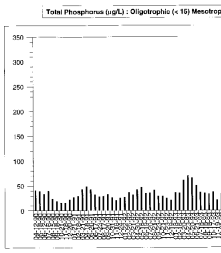
Graph B

Total phosphorus bar g
Lake Bennett in Orang



Graph D

Chlorophyll bar graph for Lake Little Bear in Seminole County



Graph E

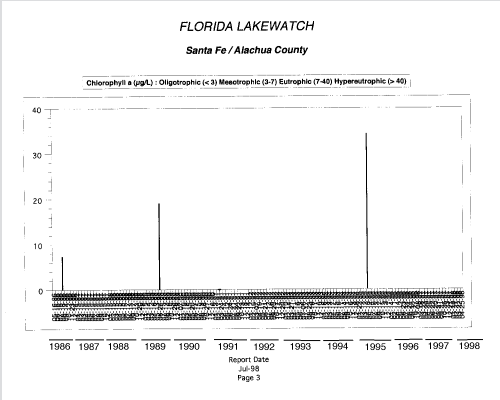
Total phosphorus bar g
Lake Redwater in Puti

"The more data we have to work wit

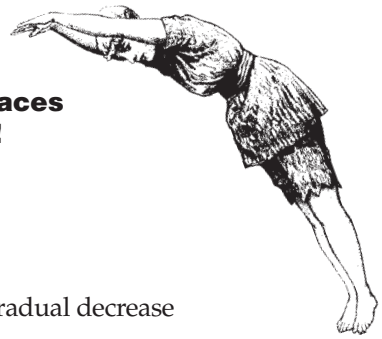
The two graphs below were created from the same 13-year Lake Santa Fe chlorophyll dat taken. The graph on the right includes <u>all</u> the data collected. The purpose of this little ex points—and how sampling regularly and on schedule pays off wi

Too Few Samples?

This LAKEWATCH bar graph illustrates how difficult it is to decipher a lake's "story" when only a few sporadic samples are taken. With only three bars on the graph, it appears that this lake is experiencing a steady increase in chlorophyll — a possible cause for alarm. These same three bars are actually only a portion of a thirteen year data set. See "Full Story" graph (right) for the complete picture.



nto data

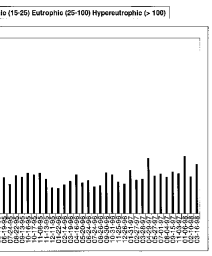


listed below. Write your answers in the spaces
Now you're ready for your own data packet!

4____ minimal change overall

5____seasonal cycling

6____an abrupt increase followed by a gradual decrease



graph for
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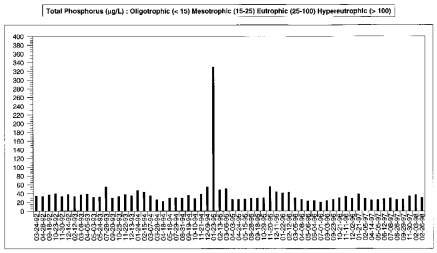
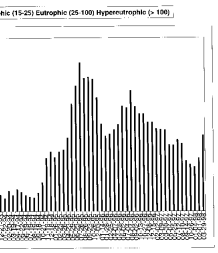
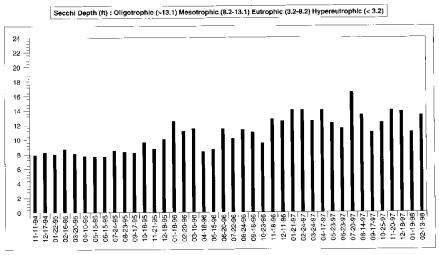


Graph C

Total phosphorus bar graph for
Lake Estella East in Orange County



graph for
nam County



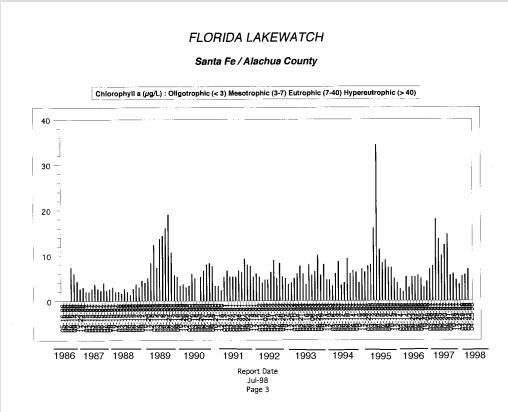
Graph F

Secchi depth bar graph for
Lake Isleworth in Orange County

Answers: (1) F **(2)** C **(3)** A **(4)** B **(5)** D **(6)** E

th, the clearer the picture becomes."

ta set. The graph on the left shows only a few data points as if only a few samples had been
ercise is to illustrate how easy it is to come to misleading conclusions with only a few data
ith a clearer picture of your lake's story. See below for more details.



The full story

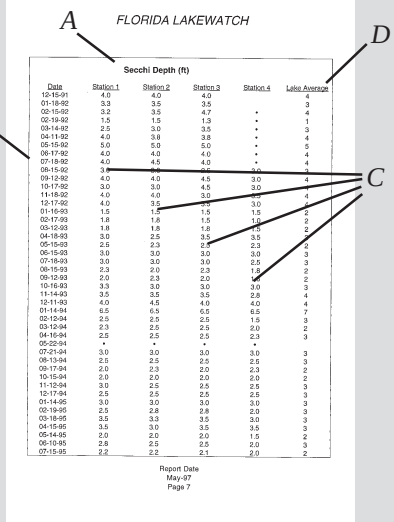
This bar graph shows all thirteen years of monthly chlorophyll data. With so many data points illustrated in the graph, it becomes much easier to see the complete story. Notice the fluctuations in the chlorophyll levels are fairly consistent, with just a couple of "spikes" or unusual events. This pattern of spikes can most likely be interpreted as infrequent algae blooms, which occur naturally for a variety of reasons—no cause for alarm.

Tables

provide data, or numbers, in a list-type format. They might not be as interesting to look at as the graphs but tables are useful as they display your data in full detail including every single sampling date and the data for every individual station you monitor.

By studying the numbers, you can see if one station has consistently higher or lower numbers than the others. And then you can begin to ask yourself why this might be happening.

Not interested in studying all those numbers? No problem. File the tables away and feel good that you have them if you should ever need them in the future. But if you're game to try, read on:



Secchi Depth (ft)

Date	Station 1	Station 2	Station 3	Station 4	Lake Average
12-15-91	4.0	4.0	4.0		4
01-18-92	3.3	3.5	3.5		3
02-15-92	3.2	3.5	4.7	•	4
02-19-92	1.5	1.5	1.3	•	1
03-14-92	2.5	3.0	3.5	•	3
04-11-92	4.0	3.8	3.8	•	4
05-15-92	5.0	5.0	5.0	•	5
06-17-92	4.0	4.0	4.0	•	4
07-18-92	4.0	4.5	4.0	•	4
08-15-92	3.0	3.0	3.5	3.0	3
09-12-92	4.0	4.0	4.5	3.0	4
10-17-92	3.0	3.0	4.5	3.0	3
11-18-92	4.0	4.0	3.0	3.0	4
12-17-92	4.0	3.5	3.5	3.0	3
01-16-93	1.5	1.5	1.5	1.5	2
02-17-93	1.8	1.8	1.5	1.0	2
03-12-93	1.8	1.8	1.8	1.5	2
04-18-93	3.0	2.5	3.5	3.5	3
05-15-93	2.5	2.3	2.5	2.3	2
06-15-93	3.0	3.0	3.0	3.0	3
07-18-93	3.0	3.0	3.0	2.5	3
08-15-93	2.3	2.0	2.3	1.5	2
09-12-93	2.0	2.3	2.0	1.5	2
10-16-93	3.3	3.0	3.0	3.0	3
11-14-93	3.5	3.5	3.5	2.5	4
12-11-93	4.0	4.5	4.0	4.0	4
01-14-94	6.5	6.5	5.5	6.5	7
02-12-94	2.5	2.5	2.5	1.5	3
03-12-94	2.3	2.5	2.5	2.0	2
04-16-94	2.5	2.5	2.5	2.5	3
05-22-94	•	•	•	•	
07-21-94	3.0	3.0	3.0	3.0	3
08-13-94	2.5	2.5	2.5	2.5	3
09-17-94	2.0	2.3	2.0	2.3	2
10-15-94	2.0	2.0	2.0	2.0	2
11-12-94	3.0	2.5	2.5	2.5	3
12-17-94	2.5	2.5	2.5	2.5	3
01-14-95	3.0	3.0	3.0	3.0	3
02-19-95	2.5	2.8	2.8	2.0	3
03-18-95	3.5	3.3	3.5	3.0	3
04-15-95	3.5	3.0	3.5	3.5	3
05-14-95	2.0	2.0	2.0	1.5	2
06-10-95	2.8	2.5	2.5	2.0	3
07-15-95	2.2	2.2	2.1	2.0	2

Report Date
May-97
Page 7

Table

LAKEWATCH data packets contain one table for each of the "big four" parameters* and each table is presented in the same format:

The heading (A) at the top of the table tells you what is being measured.The table above displays Secchi Depth data.

Sampling dates are listed along the left-hand side (B). The columns to the right of that include the actual measurements from the individual stations monitored every month (C). Each column is a listing of the separate monitoring stations.

The column on the far right (D) lists the average of all the individual stations monitored for that particular day of sampling. This number is also used in the bar graphs.

* total phosphorus, total nitrogen, chlorophyll and water clarity

Let us introduce you

We've referred to the Florida Lake Management Society (FLMS) many times in this newsletter and it occurred to us that you haven't been formally introduced.

FLMS is a state chapter of the national organization, the North American Lake Management Society (NALMS). It's been in existence since 1988 and was created with the goal of promoting the protection, enhancement, conservation, restoration, and management of Florida's aquatic resources, while also providing a forum for education and information exchange.

Its members include folks from regulatory agencies, government, and professional consulting firms — even a few LAKEWATCH volunteers.

Annual symposiums are held each year by both the national organization and its state chapters. These annual conferences provide presentations on issues of interest to scientists, resource managers, and lay people.

One of the goals of the annual conferences is to facilitate a "technology transfer" from professional scientists and resource managers to shoreline property owners about how they can protect and enhance their waterbodies. It also provides an excellent opportunity for lake professionals to receive input from lakefront homeowners and associations concerning their needs.

Last April, FLMS teamed up with the Southeast Region of NALMS for its annual Symposium.The meeting was held in Orlando. Proceedings from that meeting will soon be available on the FLMS internet web page which can be accessed from the NALMS web page.

The FLMS publishes a newsletter three times a year and arrangements are being made to exchange mailing lists between FLMS and Florida LAKEWATCH.

Representatives from the FLMS will also be invited to future LAKEWATCH meetings in an effort to get to know one another better and to exchange information about area lakes.

Any more questions?
Feel free to call or write to:

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E-mail: battoe@atlantic.net
NALMS web site:
http://www.nalms.org/

Boating Law Update - FYI

Another boating law was passed this year in an effort to curb Florida's steady increase in boating accidents. Among other things, the new law mandates that:

♦ anyone cited for a moving violation or lack of safety equipment, twice or more in one year, will be required to attend a boating safety course,

♦ boaters refusing to take a chemical test to determine blood/alcohol levels will be given a $500 civil penalty,

♦ all boat operators (including those under 21) that appear to be operating a vessel while under the influence of alcohol can now be cited for a BUI (boating under the influence). If the blood alcohol level is of .02 or above the penalty is 50 hours of community service. If the blood alcohol level is .08 or above, offenders can be arrested.

♦ Citations for BUIs are now concurrent with DUIs (driving under the influence of alcohol). Both will be kept on the same record and will result in increased fines and jail time. A fourth BUI or DUI conviction is a felony.

Enforcement efforts are also being increased. Sting operations are underway around the state to uncover violations by personal watercraft vendors and boaters can expect an increase in enforcement, even for minor violations.

For more information, contact Capt. Jim Brown at the Florida Department of Environmental Protection/Division of Law Enforcement: 850-488-5757

Lab Notes

This month marks the half-way point for the year and we'd like to take this opportunity to thank our volunteers for being so good at getting those samples to the collection centers every month. Keeping a steady flow of samples coming into the water chemistry lab helps immensely in preventing a bottle-neck effect at the end of the year.

If you ever run out of sample bottles,
the best thing to do is to use empty small spring or drinking water bottles from the grocery store. No-no's include things like frosting containers or soft drink bottles; they often contain phosphoric acid and other contaminants that are difficult to rinse out and will ruin the sample. If you should run out of bottles please don't hesitate to call the citizen message line and leave a slow and clearly w orded message. We'll send the supplies you need ASAP!

There is no substitute...
for the algae filters in your filter kits. Please be sure to use only the filters we've provided. They're made of glass fibers, not paper, and they have a special pore size to trap very small algae cells. Keep up the great work!

If you have ANY questions, please don't hesitate to call our citizen message line: 1-800-525-3928.

VOLUNTEER BULLETIN BOARD

The Great American Secchi Dip-In 1998

June 27 - July 12

All active LAKEWATCH water samplers should have received invitations to participate in the Great Secchi Dip-In this year. The project, in its fifth year, is sponsored by the US EPA's Clean Lakes Program and the North American Lake Management Society.

Originating in the US the project is now an international event that helps instill a sense of connection among all volunteer water samplers and helps raise public awareness about water issues.

LAKEWATCH volunteers that collected water clarity data between the dates listed above can still participate in the project by obtaining a questionnaire from the web site or calling the number below.

A summary of the Dip-in results can be obtained from the web or by contacting:

Phone: Bob Carlson 330/672-3849
E-mail: rcarlson@kent.edu
Fax: 330/672-3713
Web site: **http://humboldt.kent.edu/~dipin/**

Attention:

Orange and Seminole County Samplers

The Casselberry collection center has moved to Building C, but is still within the sample "complex" at the Public Works Department.

The storage freezer and supplies are now in a small storage room on the far right side of the building.

New Location for Ocoee Collection Center

370 Enterprise Drive
Ocoee, FL 34761
Contact: Buddy Elmore
407/656-6090

Clean Water Action Plan

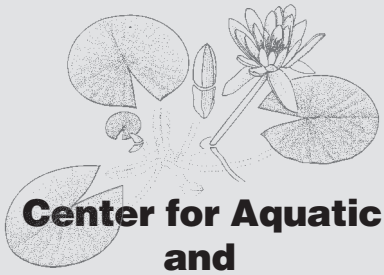
A clean water action plan has been published recently that targets community-based water management issues. In addition to providing small grants to enable organizations to build watershed partnerships and advance watershed restoration efforts, the plan also offers increased technical assistance to citizens interested in local watershed issues.

The plan is available on the EPA homepage at **www.epa.gov/cleanwater/** or can be ordered from the **National Center for Enviromental Publications (Phone: 1-800-490-9198)**. Ask for publication # EPA 840-R-98-001.

Women anglers...

around the state are enjoying new opportunities to 'stretch a line' thanks to the Florida Game and Fresh Water Fish Commission (GFC). The GFC is now organizing "Ladies Bait Your Own Hook" events around the state to provide fishing workshops for women anglers who want to learn how to fish, or who already know how but simply want an excuse to enjoy the (often rare) opportunity to get out on the water.

Workshops are held periodically based on area interest. For more information and to express your interest call Bob Wattendorf with the GFC (850)488-0520.



Center for Aquatic and Invasive Plants

New name, Same Great Service

The University of Florida's Center for Aquatic and Invasive Plants might have a new name (formerly the Center for Aquatic Plants) but it continues to be a one-stop shop for information about aquatic, wetland and invasive plants.

It's also the home of **APIRS**, an impressive aquatic plant information retrieval system (library) that houses over 46,000 references. The collection is mostly comprised of scientific articles from peer reviewed journals, but also includes books, agency reports, and proceedings of research conferences.

Articles are available concerning chemical control methods (herbicides), biological control methods (plant eating fish, insects, or pathogens), and mechanical control methods (machines). The collection has also expanded to include more than 6,000 articles about wetlands.

Anyone can contact APIRS for a free literature search list about aquatic and wetland plants. Copies of up to 10 documents from the APIRS library are available for research purposes.

Inquiring minds with access to the Internet can do their own literature search on the APIRS database via their web site. The web site itself is a gold mine of information about aquatic, invasive and wetland plants.

The Center also offers a free newsletter, *AQUAPHYTE*, published twice a year. The newsletter is on-line at the APIRS website or the printed version can be subscribed to for free.

For more information, contact:

Karen Brown
352/392-1799
kpb@gnv.ifas.ufl.edu
Web site: **http://aquat1.ifas.ufl.edu/**

UNIVERSITY OF FLORIDA
Institute of Food and Agricultural Sciences
Department of Fisheries and Aquatic Sciences
Florida LAKEWATCH
7922 NW 71st Street
Gainesville, FL 32653

ADDRESS SERVICE REQUESTED

NON-PROFIT
ORGANIZATION
U.S. POSTAGE PAID
UNIVERSITY OF FLORIDA
IFAS / CES

You will be deleted from our mail list if we don't hear from you now!

State law (Section 283.55 Florida Statutes) requires that we purge our mail list every other year and so we will be deleting all those individuals who don't respond by September 1.

All it takes is one call, e-mail, letter, or fax and you will continue to receive free LAKEWATCH newsletters as well as invitations to meetings and LAKEWATCH events. Please let us hear from you soon!

Phone: 1-800-525-3928 Fax: 352/846-1088
E-mail: lakewat@nervm.nerdc.ufl.edu
Address: 7922 NW 71st Street
Gainesville, FL 32653

When you do contact us, please be sure to provide the following information as clearly as possible:

Lake name	Address	**Do you have**
County name	Phone and/or Fax	**LAKEWATCH** equipment?
Your name	E-mail	**Yes** or **No**

Dear Friend of Your Lake,

Do you have a concern about your lake and an interest in its future? If you have access to any type of boat, can spend two hours each month on your lake, and are willing to monitor for at least a year, you might be eligible for the Florida LAKEWATCH volunteer program.

Florida LAKEWATCH is currently the only research program gathering monthly data to study such a large number and a wide variety of Florida's lakes. However, without the help of volunteers, it would not be possible.

Participants in the Florida LAKEWATCH program receive:

* a newsletter subscription
* use of sampling equipment
* training in monitoring procedures
* periodic reports and an annual report
* access to lake experts (limnologists)
* invitations to LAKEWATCH activities

For more information about how you can become a LAKEWATCH volunter, contact:

***Florida* LAKEWATCH**
7922 NW 71st Street
Gainesville, FL 32653
1-800-LAKEWATCH (1-800-525-3928)
E-mail: lakewat@nervm.nerdc.ufl.edu
WEB SITE:
http://www.ifas.ufl.edu/~lakewatch/